

AMENDMENTS TO THE CLAIMS

LISTING OF THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1. (Currently Amended) A wireless acoustic receiving device, comprising:

wireless transmission means for transmitting a service request signal to request an acoustic signal desired by a user;

wireless receiving means for receiving a transmission signal containing the acoustic signal transmitted in response to the service request signal;

demodulation/decoding means for applying demodulation and/or decoding processing to the signal received by wireless receiving means and restoring the received signal to an acoustic signal; and

electro-acoustic transform means for transforming the acoustic signal restored by the demodulation/decoding means to a sound wave for output to the user, wherein the demodulation/decoding means comprises:

decoding means for separating main information and sub information from the signal received by the wireless receiving means;

feature information restoring means for restoring

feature information from the sub information;

information restoring means for conducting the restoration processing of the main information using the feature information restored by the feature information restoring means; and

information source decoding means for restoring the acoustic signal upon decoding an output signal of the information restoring means.

Claim 2 (Original). The wireless acoustic receiving device according to claim 1, wherein the electro-acoustic transform means is formed of at least two or more electro-acoustic transform elements and outputs the acoustic signal in stereo sound.

Claim 3. (Canceled).

Claim 4. (Currently Amended) The wireless acoustic receiving device according to claim 3 1, wherein

the demodulation/decoding means further comprises deinterleave means for returning a data order of the main information to an initial state.

Claim 5. (Currently Amended) The wireless acoustic receiving device according to claim 3 1, wherein

the information source decoding means decodes the acoustic signal by conducting discrete cosine

inverse transform processing on the output signal of the information restoring means.

Claim 6. (Currently Amended) The wireless acoustic receiving device according to claim 3 1, wherein the information source decoding means restores the acoustic signal by conducting inverse high-velocity Fourier transform processing on the output signal of the information restoring means.

Claim 7. (Currently Amended) A vehicle-loaded acoustic device, comprising:

wireless transmission means for transmitting a service request signal to request an acoustic signal desired by a user;

wireless receiving means for receiving a transmission signal containing the acoustic signal transmitted in response to the service request signal;

demodulation/decoding means for restoring the acoustic signal by applying demodulation and/or decoding processing to the signal received by the wireless receiving means; and

electro-acoustic transform means having at least two electro-acoustic transform elements for transforming the acoustic signal restored by the demodulation/decoding means to a sound wave output in stereo sound;

display means for displaying information concerning the acoustic signal received by the wireless receiving means; and

present position locating means in which the information concerning the acoustic signal received by the wireless receiving means and information concerning the present position locating means are one of simultaneously and alternately displayed on the display means.

Claim 8 (Canceled).

Claim 9 (Currently Amended). The vehicle-loaded acoustic device according to claim 8 7, further comprising remote control means in which control data for operation control is entered through the remote control means.

Claim 10 (Original). The vehicle-loaded acoustic device according to claim 9, wherein the remote control means transmits the control data via infrared ray.

Claim 11. (Currently Amended) The vehicle-loaded acoustic device according to claim 8 7, further comprising:

television broadcasting receiving means in which the information concerning the acoustic signal received by the wireless receiving means and images of television broadcasting received at the television broadcasting receiving means are one of simultaneously and alternately displayed on the display means.

Claim 12 (Canceled).

Claim 13 (Previously Presented). The vehicle-loaded acoustic device according to claim 7, wherein the wireless transmission means, the wireless receiving means and the demodulation/decoding means include removable components and the removable components are used as communication equipment upon being removed.

Claim 14 (Currently Amended). A portable acoustic output device, comprising:

wireless transmission means for transmitting a service request signal to request an acoustic signal desired by a user;

wireless receiving means for receiving a transmission signal containing the acoustic signal transmitted in response to the service request signal;

demodulation/decoding means for restoring the acoustic signal upon applying demodulation and/or decoding processing to the signal received by the wireless receiving means;

electro-acoustic transform means having at least two electro-acoustic transform elements for transforming the acoustic signal restored by the demodulation/decoding means to a sound wave output in stereo sound, wherein the electro-acoustic transform element possessed by the electro-acoustic transform means is human body attachable; and

a battery for powering said wireless transmission means and

said wireless receiving means;

operating means for inputting control data in the case of receiving the acoustic signal; and

a main unit case and a cable, wherein the electro-acoustic transform means is connected via the cable to the main unit case in which the wireless transmission means, the wireless receiving means, and the demodulation/decoding means are stored, and the operating means is connected along a length of the cable.

Claim 15 (Canceled).

Claim 16 (Canceled).

Claim 17 (Currently Amended). The portable acoustic device according to claim ~~16~~ 14, wherein the operating means comprises operation keys for inputting the control data regarding telephone communications.

Claim 18 (Currently Amended). The portable acoustic output device according to claim ~~16~~ 14, wherein the operating means comprises rotary push type operation keys.

Claim 19 (Currently Amended). The portable acoustic output device according to claim ~~16~~ 14, wherein the operating means comprises moving round push type operation keys.

Claim 20 (Currently Amended). The portable acoustic output device according to claim 16 14, wherein the operating means comprises a plurality of pushing switches.

Claim 21 (Canceled)

Claim 22 (Currently Amended). The portable acoustic output device according to claim 16 14, further comprising :

display means for displaying information regarding the acoustic signal received by the wireless receiving means.

Claim 23 (Original). The portable acoustic output device according to claim 22, wherein the display means also displays information regarding telephone conversation.

Claim 24 (Canceled).

Claim 25 (Currently Amended). The portable acoustic output device according to claim 24 22, wherein the display means is formed integral integrally with the operating means.

Claim 26. (Currently Amended) The portable acoustic output device according to claim 24 22, further comprising:

weak information transmission means for transmitting the acoustic signal restored by the demodulation/decoding means; and

weak information receiving means for receiving the acoustic signal transmitted by the weak information transmission

means and for supplying a received signal to the electro-acoustic transform means wherein

the acoustic signal is supplied to the electro-acoustic transform means via a wireless connection.

Claim 27 (Original). The portable acoustic output device according to claim 26, wherein the weak information transmission means transmits the acoustic signal using an electromagnetic wave.

Claim 28 (Original). The portable acoustic output device according to claim 27, wherein the electromagnetic wave is in the frequency band over 10 MHz and below 1 GHz.

Claim 29. (Previously Presented) The portable acoustic output device according to claim 27 further comprising control means, wherein

the weak information receiving means transmits control data input from the operating means utilizing the electromagnetic wave, and the weak information transmission means receives the control data transmitted from the weak information receiving means for output to the control means.

Claims 30-34 (Canceled).

Claim 35. (Currently Amended) An automobile comprising: wireless transmission means for transmitting a service

request signal to request an acoustic signal desired by a user;

wireless receiving means for receiving a transmission signal containing the acoustic signal transmitted in response to the service request signal;

demodulation/decoding means for restoring the acoustic signal by applying demodulation and/or decoding processing to the signal received by the wireless receiving means; and

electro-acoustic transform means having at least two electro-acoustic transform elements for transforming the acoustic signal restored by the emodulation/decoding means to a sound wave for output in stereo sound;

display means; and

present location locating means, wherein information regarding the acoustic signal received by the wireless receiving means and information concerning the present position locating means are one of simultaneously and alternately displayed on the display means.

Claim 36. (Canceled)

Claim 37. (Previously Presented) An information transmission device comprising:

information source coding means for information source coding an input signal fed thereto;

feature extracting means for extracting feature information included in the input signal;

quantization means for vector quantizing an output signal

of the information source coding means using the feature information extracted by the feature extracting means;

modulation means for modulating an output signal of the quantization means;

wireless transmission means for transmitting an output signal of the modulation means to a terminal device;

wireless receiving means for receiving an output signal from the terminal device; and

demodulation means for applying demodulation and/or decoding processing to the signal received by the wireless receiving means wherein

contents of the input signal are changed based on an output signal of the demodulation means.

Claim 38. (Previously Presented) The information transmission device according to claim 37, further comprising:

interleave means for sorting output data from the information source coding means; and

weight function forming means for forming a weight function from the feature information extracted by the feature information extracting means.

Claim 39. (Previously Presented) The information transmission device according to claim 37, wherein

the information source coding means performs discrete cosine transform processing on the input signal.

Claim 40. (Previously Presented) The information transmission device according to claim 37, wherein the information source coding means performs high velocity Fourier transform processing on the input signal.

Claims 41-42. (Canceled)

Claim 43. (Previously Presented) A wireless acoustic receiving method, comprising the steps of:
receiving a signal;
separating main information and-sub information from the received signal;
restoring feature information obtained from the sub information; and
restoring the main information using the restored feature information and by information source decoding the restored main information, restoring an acoustic signal from the received signal.

Claim 44. (Previously Presented) The wireless acoustic receiving method according to claim 43, further comprising the step of performing discrete cosine inverse transform processing as the step of information source decoding.

Claim 45. (Previously Presented) The wireless acoustic receiving method according to claim 43, further comprising the step of performing inverse high velocity Fourier transform

processing as the step of information source decoding.

Claims 46-51. (Canceled)

Claim 52. (Previously Presented) An information transmission method, comprising the steps of:

information source coding an input signal and extracting feature information contained in the input signal;

conducting vector quantization of an output from the step of information source coding utilizing the extracted feature information;

modulating an output signal from the step of vector quantization for transmitting to a terminal device;

receiving a transmission signal from the terminal device; and

restoring data in the signal transmitted from the terminal device after applying demodulation and/or decoding processing to the signal and changing contents of the input signal based on contents of the restored data.

Claim 53. (Previously Presented) The information transmission method according to claim 52, comprising a further step of performing discrete cosine transform processing on the input signal as the step of information source coding.

Claim 54. (Previously Presented) The information transmission method according to claim 52, comprising the further

step of performing high velocity Fourier transform processing on the input signal as the step of information source coding.

Claims 55-73. (Cancelled)